**CSC 226: Software Design and Implement – Final Project Design Document**

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**Motivation:** This project was inspired by an interest to make a small interactive game out of a program we created earlier in the semester.

**Purpose:** The purpose of this assignment is to beat the game of Nim by clicking the screen to take away the balls that are in the jar on the screen.

**Resources:** This project will be extending the A5 homework assignment by way of adding new functions that are listed below.

**Files:**

**Initial Design Plan:**

My initial A5 program included the following functions:

* nim\_gonna\_win()
* player\_turn()
* main()

The extended project will include:

* A ball class to create the balls that will be clicked on. The CRC card is shown below.
* A new function called draw\_jar() that will have a turtle draw the jar that the balls will be inside.

**CRC Card:**

|  |  |
| --- | --- |
| **Class name: Ball** | |
| **Class Attributes:** | **Class Collaborations (other classes):** |
| * self.start\_point * self.clicker * self.turtle * self.size | * turtle |
| **Class Methods:** | **Class Collaborations (other classes):** |
| * \_\_init\_\_(): Creates the ball to be clicked on with start point, size, and click handler * draw\_ball(): Draws the balls with a turtle object * click\_ball(): Creates the click handler on the circle | * turtle |